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| 09/842,741      | 04/25/2001  | Kojiro Hamabe        | P/1929-80           | 7381             |

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EXAMINER

RAMPURIA, SHARAD K

ART UNIT PAPER NUMBER

2683

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/842,741

Applicant(s)

HAMABE, KOJIRO

Examiner

Sharad Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) 1-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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***Response to Amendment***

Claims 1-28 are cancelled.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 29-56 are rejected under 35 U.S.C. 102 (e) as being anticipated by Bonta et al.

29. Regarding claims 29, 36, Bonta disclosed An area designing apparatus for a mobile communication system (abstract), comprising:

means for placing a plurality of communicating mobile stations corresponding to traffic distribution information; (24a-24c; fig.2; col.3; 48-57)

means for deciding a base station to which each of the mobile stations is radio linked; (col.3; 48-57)

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means for calculating a transmission power of a desired wave signal that each base station transmits to each of the mobile stations that are radio linked thereto; (col.5; 42-52)

means for calculating transmission power of a signal that each base station transmits to each of the mobile stations that are radio-linked thereto so that a ratio of reception power of a signal to reception power of interferences converges to a predetermined value, said reception power of a signal being that of a signal that each mobile station receives from the base station radio-linked thereto, said reception power of interferences being that of interferences that the same mobile station receives from the base station radio-linked thereto and from each of the other base stations, converges to a predetermined value; (col.3; 12-31)

means for successively selecting, while each base station is transmitting the calculated transmission power signal, each of a plurality of evaluation positions on the map which are independent from positions at which the mobile stations are placed on the map; (col.5; 26-col.6; 10) and,

means for calculating reception power of a signal received by an additional evaluation mobile station placed on the map at each selected evaluation position, the signal being received from the base station that the additional evaluation mobile station is radio-linked thereto, and for calculating reception power of interferences received by the additional evaluation mobile station from all of the base stations including the base station to which the additional evaluation mobile station is radio-linked; (col.3; 12-31)

wherein communication quality at each evaluation position is evaluated corresponding to the calculated reception power of the desired wave signal and the calculated reception powers of the interference wave signals. (col.5; 17-25)

30. Regarding claims 30, 37, Bonta disclosed The area designing apparatus as set forth in claims 29, 36 respectively wherein a random deviation amount (random lognormal fading distribution data; col.5; 40-46) is added to a propagation loss of a signal transmitted between the evaluation mobile station placed at each evaluation position and each base station, wherein corresponding to the resultant propagation loss, (col.5; 26-52) the reception power of the desired wave signal and the reception powers of the interference wave signals are calculated so as to evaluate the communication quality at each evaluation position, and wherein the evaluation of the communication quality is repeated and the ratio that represents the number of evaluation results that do not satisfy a predetermined level is obtained. (col.6; 31-55 & col.7; 34-55)

31. Regarding claims 31, 38, Bonta disclosed The area designing apparatus as set forth in claims 29, 36 respectively, wherein the communication quality at each evaluation position in an area that contains some of the plurality of evaluation positions is evaluated, and wherein a ratio that represents the number of evaluation results at the evaluation positions in the area do not satisfy a predetermined level is obtained. (col.5; 53-col.6; 30)

32. Regarding claims 32, 39 Bonta disclosed The area designing apparatus as set forth in claims 29, 36 respectively, wherein the evaluation positions are decided so that some of the plurality of evaluation positions are formed in a regular polygon shape. (22; fig.2; col.3; 48-57)

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33. Regarding claims 33, 40, Bonta disclosed The area designing apparatus as set forth in claims 29, 36 respectively, further comprising: means for displaying with visual information, the communication quality at each evaluation position. (16; fig.1; col.2; 66-col.3; 5 & col.3; 48-57)

34. Regarding claims 34, 41, Bonta disclosed The area designing apparatus as set forth in claims 30, 37 respectively, further comprising: means for displaying with the visual information, the ratio that represents evaluation results that do not satisfy a predetermined level. (col.2; 66-col.3; 31)

35. Regarding claims 35, 42, Bonta disclosed The area designing apparatus as set forth in claims 29, 36 respectively, further comprising: means for inputting (14; fig.1) the traffic distribution information; means for storing (18; fig.1) the input traffic distribution information; and means for out putting (16; fig.1) the visual information from the apparatus. (col.2; 66-col.3; 12)

43. Regarding claims 43, 50, Bonta disclosed An area designing method for a mobile communication system (abstract), comprising steps of:

placing a plurality of communicating mobile stations corresponding to traffic distribution information; (24a-24c; fig.2; col.3; 48-57)

deciding a base station to which each of the mobile stations is radio linked; (col.3; 48-57)

calculating transmission power of a signal that each base station transmits to each of the mobile stations that are radio-linked thereto so that a ratio of reception power of a signal to reception power of interferences converges to a predetermined value, said reception power of a

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signal being that of a signal that each mobile station receives from the base station radio-linked thereto, said reception power of interferences being that of interferences that the same mobile station receives from the base station radio-linked thereto and from each of the other base stations, converges to a predetermined value; (col.3; 12-31)

successively selecting, while each base station is transmitting the calculated transmission power signal, each of a plurality of evaluation positions on the map which are independent from positions at which the mobile stations are placed on the map; (col.5; 26-col.6; 10) and,

calculating reception power of a signal received by an additional evaluation mobile station placed on the map at each selected evaluation position, the signal being received from the base station that the additional evaluation mobile station is radio-linked thereto, and for calculating reception power of interferences received by the additional evaluation mobile station from all of the base stations including the base station to which the additional evaluation mobile station is radio-linked; (col.3; 12-31)

wherein communication quality at each evaluation position is evaluated corresponding to the calculated reception power of the desired wave signal and the calculated reception powers of the interference wave signals. (col.5; 17-25)

44. Regarding claims 44, 51, Bonta disclosed The area designing method as set forth in claims 43, 50 respectively, wherein a random deviation amount (random lognormal fading distribution data; col.5; 40-46) is added to a propagation loss of a signal transmitted between the evaluation mobile station placed at each evaluation position and each base station, wherein corresponding to the resultant propagation loss, (col.5; 26-52) the reception power of the desired wave signal and

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the reception powers of the interference wave signals are calculated so as to evaluate the communication quality at each evaluation position, and wherein the evaluation of the communication quality is repeated and the ratio that represents the number of evaluation results that do not satisfy a predetermined level is obtained. (col.6; 31-55 & col.7; 34-55)

45. Regarding claims 45, 52, Bonta disclosed The area designing method as set forth in claims 43, 50 respectively, wherein the communication quality at each evaluation position in an area that contains some of the plurality of evaluation positions is evaluated, and wherein a ratio that represents the number of evaluation results at the evaluation positions in the area do not satisfy a predetermined level is obtained. (col.5; 53-col.6; 30)

46. Regarding claims 46, 53, Bonta disclosed The area designing method as set forth in claims 43, 50 respectively, wherein the evaluation positions are decided so that some of the plurality of evaluation positions are formed in a regular polygon shape. (22; fig.2; col.3; 48-57)

47. Regarding claims 47, 54, Bonta disclosed The area designing method as set forth in claims 43, 50 respectively, further comprising: a step of displaying the communication quality at each evaluation position with visual information. (16; fig.1; col.2; 66-col.3; 5 & col.3; 48-57)

48. Regarding claims 48, 55, Bonta disclosed The area designing method as set forth in claims 44, 51 respectively, further comprising: a step of displaying the ratio that represents evaluation results that do not satisfy a predetermined level with the visual information. (col.2; 66-col.3; 31)



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49. Regarding claims 49, 56 Bonta disclosed The area designing method as set forth in claims 43, 50 respectively, further comprising steps of: inputting (14; fig.1) the traffic distribution information; storing (18; fig.1) the input traffic distribution information; and outputting (16; fig.1) the visual information. (col.2; 66-col.3; 12)

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Thu. (8:45-6:15) alternate Fri.( 8:45-5:15).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Sharad Rampuria  
October 19, 2004

  
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